AMENDMENTS TO THE CLAIMS

Pursuant to 37 C.F.R. § 1.121 the following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method for a roaming user to establish a security association with an application server in a visited network, ~~wherein the roaming user has completed a mutual authentication with a Bootstrapping Server Function (BSF) that performs user identity initial verification in a generic authentication architecture in his home network, and obtained a Bootstrapping-Transaction Identifier (B-TID) assigned to him by the BSF,~~ comprising the steps of:

the application server in the visited network receiving a service request message~~, by the application server in the visited network,~~ from the roaming user, said service request message containing a Bootstrapping-Transaction Identifier (B-TID), the B-TID being assigned to the roaming user by a Bootstrapping Server Function (BSF) based upon a mutual authentication of the roaming user with the BSF that performs user identity initial verification in a generic authentication architecture in a home network of the roaming user;

the application server in the visited network inquiring from an authentication entity in the visited network about the roaming user's user information associated with the B-TID, the user information comprising user authentication results of the generic authentication architecture in the roaming user's home network;

the authentication entity finding out the home network to which the user belongs according to the B-TID;

the authentication entity acquiring the user information associated with the B-TID from the BSF in the roaming user's home network, and returning the acquired user information to the application server;~~the B-TID;,~~

the application server in the visited network obtaining,~~ by the application server in the visited network,~~ the roaming user's user information comprising the user authentication results of the

2

generic authentication architecture in the roaming user's home network, ~~wherein the user~~
~~information is associated with the B-TID~~ ; and

the application server in the visited network establishing a security association with the
roaming user, ~~by the application server in the visited network,~~ according to the user authentication
results of the generic authentication architecture in the roaming user's home network.

2. (Cancelled)

3. (Currently Amended) The method according to Claim ~~2~~1, wherein the authentication entity
in the visited network is a BSF or a generic authentication architecture proxy in the visited network;

the step of the BSF or the generic authentication architecture proxy in the visited network
acquiring the user information associated with the B-TID from the roaming user's home network
comprises:

the BSF or the generic authentication architecture proxy in the visited network directly sending
a query message to the BSF in the roaming user's home network, inquiring about the user
information associated with the B-TID; and obtaining the user information associated with the B-
TID from the response message returned by the BSF in the roaming user's home network.

4. (Currently Amended) The method according to Claim 3, wherein the generic authentication
architecture proxy in the visited network is an independent server, or a server combined with an
authentication, authorization and accounting (AAA) server in the local network, or a server
combined with the application server in the local network.

5. (Currently Amended) The method according to Claim ~~2~~1, wherein, the authentication entity
~~entiey~~ in the visited network is ~~the~~ an authentication, authorization and accounting (AAA) server in
the visited network;

the step of the AAA server in the visited network acquiring the user information associated
with the B-TID from the BSF in the roaming user's home network comprises:

3

the AAA server in the visited network sending a query message to the AAA server in the roaming user's home network, inquiring the information assoiciated the the B-TID;

the AAA server in the home network inquiring the BSF in the local network, after the BSF in the local network finding the user information associated with the B-TID, it returning a response message, with the user information associated with the B-TID in it, to the local AAA server, and the AAA server returning a response message, with the user information associated with the B-TID in it, to the AAA server in the visited network; and

the AAA server in the visited network obtaining the user information associated with the B-TID from the response message returned by the AAA server in the roaming user's home network.

6. (Cancelled)

7. (Original) The method according to Claim 1, wherein the user information comprises at least: key information and the user's identity.

8. (Cancelled)

9. (Cancelled)

10. (Original) The method according to Claim 7, wherein the user information also comprises the profile information associated with security.

11. (Cancelled)

12. (Cancelled)

13. (Original) The method according to Claim 7, wherein the key information is a shared key Ks generated in authentication, or a Ks-derived key and its valid term.

14. (Cancelled)

15. (Cancelled)

4

16. (New) An application server in a communication network comprising a home network and a visited network of a roaming user, comprising:

circuitry adapted for receiving a service request message from the roaming user containing a Bootstrapping-Transaction Identifier (B-TID), the B-TID being assigned to the roaming user by a Bootstrapping Server Function (BSF) based upon a mutual authentication of the roaming user with the BSF that performs user identity initial verification in a generic authentication architecture in the home network of the roaming user;

circuitry adapted for inquiring from an authentication entity about an authentication in the visited network to obtain the roaming user's user information associated with the B-TID; the roaming user's user information comprising user authentication results of the generic authentication architecture in the roaming user's home network;

circuitry adapted for obtaining the roaming user's user information from the authentication entity after the authentication entity finds out the home network to which the user belongs according to the B-TID and acquires the user information associated with the B-TID from the BSF in the roaming user's home network; and

circuitry adapted for establishing a security association with the roaming user according to the user authentication results of the generic authentication architecture in the roaming user's home network.

17. (New) The application server accoring to Claim 16, wherein the user information comprises at least: key informaitn and the user's identity.

18. (New) A system, comprising an application server according to any of claims 16-17, wherein the application server is connected with the authentication entity, and the authentication entity comprises circuitry adapted for finding out a user's home network entity.

19. (New) The system according to Claim 18, wherein the authentication entity further comprises circuitry for communicating with a BSF.